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ABSTRACT

For 2 decades, the U.S. Agency for International Development (USAID) has sought to strengthen Nepal's formal and nonformal education systems and elevate the status of women in Nepal. The extent to which USAID women's empowerment and literacy activities have contributed to increasing and improving the basic education of girls in Nepal was examined through structured interviews with 95 women. Some of the women had completed classes in basic literacy, legal literacy, and/or economic participation; others (the controls) did not complete a USAID program. Education statistics and the school records of the women's children were also examined. The USAID literacy and income generation programs were found to have helped raise the quality of rural and impoverished Nepalese women's lives in many ways. The lessons learned from the study were as follows: development of skills and knowledge among mothers can translate into higher levels of educational attainment among children; the magnitude of the impact of literacy and microenterprise activities on children's education varies by socioeconomic and cultural context; increased earnings by mothers do not necessarily or immediately translate into more education for their daughters; and maternal support for education stimulated by program participation translates into private and social savings. (MN)

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Impact Evaluation

United States Agency for International Development

PROMOTING EDUCATION FOR GIRLS IN NEPAL

In Nepal, where the female literacy rate is dismally low, girls' education has suffered from high repetition and dropout rates. Although their impact is difficult to isolate and measure, programs aimed at empowering and educating Nepalese women appear to enhance the education of both girls and boys.

SUMMARY

Women are the less privileged and by far the less educated sex in Nepal, one of the world's poorest countries. A tradition of early marriage, a high need for labor, and a limited value placed on educating girls have conspired to limit girls' educational attainment in Nepal. In 1981, 12 percent of Nepalese women were literate, compared with 35 percent of the nation's men. By 1991 female literacy (that is, including girls and women) remained dismally low at 25 percent and only 22 percent for adult women. Although their *enrollment rates* have increased substantially during the last decade, girls' *educational attainment* continues to be inhibited by high repetition and dropout rates.

Over the past two decades the U.S. Agency for International Development has sought to strengthen Nepal's formal and nonformal education systems and elevate the status of women. During the last four years USAID has advanced

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its efforts in women's empowerment by providing women with activities in basic literacy, legal literacy (classes that deal with legal rights for women), and economic participation. The program is based on the hypothesis that participation in these activities enhances the well-being not only of the women but also of their children, families, and communities.

In May 1997, USAID's Center for Development Information and Evaluation (CDIE) launched Focus on Girls: An Evaluation of USAID Programs and Policies in Education. That study includes country case studies (Guatemala, Guinea, Malawi, Nepal, Pakistan, and Egypt) and studies and reviews of program documentation from many countries. It examines the effectiveness of USAID policies and programs in increasing girls' access to primary education, improving the quality of education received, and strengthening primary educational institutions. This report is part of that overall study.

During July–August 1997, an eight-person CDIE evaluation team spent three weeks in Nepal. The team assessed the extent to which USAID's women's empowerment and literacy activities contribute to increasing and improving the basic education of girls as well as boys. The study's findings are based in part on an analysis of education statistics and other evaluations. They are also based on structured interviews with 95 women in four categories: those who 1) had completed a program in literacy, 2) had completed a program in microcredit, 3) had completed a combined program in both literacy and microcredit, or 4) had participated in none of these programs—the control group. The findings are also based on examinations of the school records of the women's children.

Literacy and income generation programs have contributed in many ways to raising the quality of life among rural and impoverished women and their families in Nepal. In 1991 less than 22 percent of adult Nepalese women were literate. With USAID/Nepal's assistance, the literacy rate of adult women increased to an estimated 25 percent in 1995 and 28 percent in 1996. Most participants reported that their experiences in literacy classes led to an increased sense of self-confidence. Armed with ideas, confidence, and information acquired during literacy classes, participants have slowly begun to assume greater autonomy and claim more authority within their domains. They have increased their participation in collective community activities and social issues, and they have begun to engage in improved health practices.

Comparisons of children who became school age prior to the program with those who were already of school age when the program began revealed that educational attainment of younger children in both the control group and the literacy group has increased by 10 percent over that of older children. Younger children in the microcredit and the microcredit-plus-literacy programs have registered greater gains—of 37 and 18 percent, respectively. The educational attainment levels of all four groups have increased over recent years. Much of the overall increase in education among children of mothers engaged in microcredit accrues to boys rather than girls. By contrast, the gender gap in the literacy group is lower, and that in the integrated literacy group is substantially lower.

The lowest average daily attendance in 1996 was recorded among children of mothers engaged in microcredit activities, at 73 percent (microcredit) and 67 percent (literacy and microcredit). Repetition rates for both boys and girls in the microcredit and integrated program groups are lower than those for the region as a whole, as is average repetition among children in the literacy group. Extremely high repetition rates among control-group children contrast sharply with those of children in all treatment groups. Children of both genders in all three program groups were three to four times as likely as children in the control group to report that their mothers help them with school.

For most women, attending classes or generating other income required that they work harder during nonclass hours or hours when they were not generating income. This is a particular burden for women who attend literacy classes, because those classes take time away from all productive labor, whereas the productivity of microcredit activities may well substitute for productive time missed elsewhere.

The opportunity cost of sending a girl to school for one year is about equal to the opportunity cost of a woman's attending a literacy class. The higher repetition rates of children whose mothers had not attended training added 34 percent to the cost of their schooling. For the poorest of the poor, assuming they can afford any opportunity costs of educational activities, education must be viewed as having immediate and direct effects to be worth the investment in time and energy. Thus, in comparing the benefits of two types of educational investments—formal schooling of girls and informal training of mothers—the relative benefits would be different, depending upon how marginal were the lives of the families involved.

A number of lessons emerge from the evaluation. Among them:

- Development of knowledge and skills among mothers may translate into higher levels of educational attainment among children.
- The magnitude of program impact on children's education varies by socioeconomic context.
- Increased earnings by mothers do not necessarily or immediately translate into more education for their daughters.
- Maternal support for children's education stimulated by program participation translates into private and social savings.

BACKGROUND

With an annual per capita income of $210, Nepal is one of the world's poorest countries. Most of its 21 million people depend on subsistence farming and survive on less than a dollar a day. About 80 percent have no access to sanitation. Nearly half are without potable water. Although infant mortality rates have declined over the last decade, 1996 rates remained high at 79 per 1,000. Meanwhile, Nepal's annual 4.6 percent fertility rate is one of the highest in the world. So is its maternal mortality rate of 536 deaths per 100,000 live births. Nepal is one of the few nations where males live longer than females (55.2 years, on average, versus 53.7).

Jungles, deserts, towering mountain peaks, and subtropical valleys characterize Nepal's landscape. Only 17 percent of the land is arable. More than 90 percent of the population live in rural areas. The country has more than 50 ethnic groups, many with their own languages, traditions, and customs. Their heritage can be traced to either Indo-Aryan Hindu caste groups or Tibeto-Burman ethnic groups. According to the 1991 census, 87 percent of Nepalese are Hindu, 8 percent Buddhist, and 5 percent Muslim.

A Nepalese woman's status and degree of freedom are established by her caste or ethnic group. Although equal educational opportunities are extended constitutionally to all woman in Nepal, a combination of factors (such as the tradition of early marriage, the need for labor, and the limited value placed on the education of girls) have combined to limit girls' levels of educational attainment. In an economy in which women seldom find equal opportunity, a growing number of Nepalese girls and women are becoming victims of trafficking in prostitution.

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Status of Education In Nepal

Since the 1950s the government has tried to improve the education system. In 1975 primary education was made free. In 1987 the government set a goal of achieving universal access to primary education by the end of the century. Nonformal education efforts, initiated by the government in 1951, increased dramatically during 1970–80 when international and local nongovernmental organizations became involved.

Literacy. In 1981 the literacy rate for the total population was 24 percent: 35.0 percent for males, and only 11.5 percent for females. The situation was much worse in rural areas, where rates for males and females were 33 percent and 9 percent, respectively. Over the next 10 years, as literacy activities escalated, overall literacy rates in Nepal increased to 40 percent. Although female literacy doubled during this period, it remained dismally low at 25 percent and only 22 percent for adult women. For low-caste women, however, the literacy rate is estimated to be a mere 3 percent. Gender disparities in Nepal's literacy rate continue to be the highest in the world.

Schools and teachers. The number of primary schools has increased steadily since 1951, when only 321 such schools existed. From 1987 through 1996, the number of primary schools almost doubled, from 12,491 to more than 23,000. Yet few schools have electricity or toilets. About half have their own source of drinking water. During 1987–96 the number of primary school teachers increased from 55,000 to 82,000. The ratio of primary teachers to total primary-age population is even lower, at 35 children to 1 teacher. (The *overall* student–teacher ratio in primary schools stands at 40 to 1, though, because schools are filled with children older than the normal age for primary school.) But the quality of teaching remains uneven. In the early 1980s, approximately 40 percent of teachers were trained, and by 1996 only about 60 percent had passed the School Leaving Certificate, obtained by passing the national examination on completion of the 10th grade.

Enrollment, participation, and dropout rates. During 1965–70, the percentage of primary-school-age children enrolled in primary schools increased from 27 percent to 32 percent. Enrollment doubled in the years 1970 through 1990, from 32 percent to 64 percent. From 1990 through 1995, enrollment of primary-school-age children increased from 64 percent to 72 percent. Primary school enrollment of girls during these years doubled, from 31 percent to 61 percent. With the large number of under- and over-age children enrolled in primary schools, the gross enrollment ratio in Nepal's primary schools is now estimated to exceed 130 percent for boys and to have reached 95 percent for girls. Yet in 1991, rural primary school attendance among girls was only 18, 30, and 4 percent for girls aged 6–9, 10–14, and 15–19, respectively.

In 1992 the repetition rate for girls in primary school ranged between 16 percent (grade 3) and 39 percent (grade 1). In 1995, 24 percent of 6- to 10-year-old children enrolled in schools repeated at least one class, and girls were found to have 1.2 times the risk of boys of repeating a class. In 1992, dropout rates for girls in primary school ranged between 6 percent (grade 3) and 25 percent (grade 1).

Education and Women-in-Development Activities

During the past 20 years USAID has supported a number of activities aimed at strengthening Nepal's formal and nonformal education system and elevating the status of women. These include support to Nepal's literacy program (1977); a major study of the status of women (1980s); the Radio Education Teacher Training project (1978); the Improving the Efficiency of

Educational Systems project (1984–94); and the University Development Linkage project (1991–96), which organized training workshops for literacy providers in Nepal.

During 1994–97 USAID/Nepal has advanced its efforts in women's empowerment. It is, in fact, the only Mission that has established women's empowerment as one of its strategic objectives. Between 1994 and 1997, USAID/Nepal funded the $6.3 million Basic Education Support: Female Literacy project. And beginning in 1997, the various activities USAID supports in basic literacy, legal rights, and microenterprises for women have been consolidated into a new three-year, $10 million Women's Empowerment project funded by USAID/Nepal and the Global Bureau.

Donor Education Activities

Although USAID has been the lead donor in adult female literacy, during the last 15 years several other donors have provided substantial support to formal and nonformal education in Nepal and to advancing the status of women. Other donors are the World Bank, UNICEF, UN Fund for Population Activities, Asian Development Bank, Denmark, Canada, Norway, England, Germany, and Japan. Recognizing the need for collaboration with those donors, USAID chairs a donor group in which the government of Nepal participates.

Goals and Strategies of the Women's Empowerment Program

The basic literacy, legal literacy, and economic participation activities conducted through the Women's Empowerment Program have been aimed at increasing women's literacy, improving the legal environment for females, and fostering women's economic participation in the market economy. The program is based on the hypothesis that participation in these activities increases women's empowerment and improves their capacity to be effective change agents in their households and communities, and will therefore enhance the well-being of their children, families, and communities. Eight international partner organizations have carried out one or more of these programs through Nepalese nongovernmental organizations in 28 districts of the country.

WOMEN'S EMPOWERMENT AND LITERACY PROGRAMS: SETTING THE CONTEXT FOR GIRLS' EDUCATION

USAID/Nepal's women's empowerment and literacy activities are aimed broadly at improving the social, cultural, and economic conditions of participants and their families. These changes, for the purpose of this study, are considered as facilitating outcomes and are important in understanding some of the contextual determinants of girls' education.

Household Decision-Making And Self-Determination

Armed with ideas, confidence, and information, participants surveyed in several recent studies (among them Burchfield[7] 1997, Save/US[8] 1997) have slowly begun to assume greater autonomy and claim more authority within their daily lives. Although most decisions are still made by the traditional heads of households, joint decision-making has become more of a norm in households of participants than in households of nonparticipants. And in some realms, participants have begun to make decisions on their own.

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[7] Shirley A. Burchfield. 1997. *An Analysis of the Impact of Literacy on Women's Empowerment in Nepal.*

[8] Save/US. 1997. *Takukot–Majh Lakuribot: 10 Year Retrospective Literacy and Empowerment.*

Burchfield and Save/US found differences between participants and nonparticipants in the degree of input and influence in decisions regarding childcare. Such decisions typically involve such matters as immunization, and the use of oral rehydration therapy to treat childhood diarrhea. They often involve reproductive management. Not only were participants more likely than nonparticipants to join their husbands in such decisions, but they were also more likely to make many of these decisions on their own. Increased participation in decision-making is not confined to health issues. Another recent study found that women who participate in basic literacy, legal literacy, or economic activities participate 30 percent more than nonparticipants in making final joint and independent decisions over how their own income is spent.

'Studies have shown that income controlled by women rather than men is more likely to be spent improving family well-being.'

These changes among participants may have a positive effect on their families, since studies have shown that income controlled by women rather than men is more likely to be spent improving family well-being. According to USAID/Nepal's February 1998 *FY 2000 Results Review and Resource Request*, "Women controlling income spent it on alleviating economic hardship in their households: 76 percent of women surveyed used their income to purchase additional food, to pay for medical treatment, or to support their children's education."

Participation in Collective Social Actions

Several studies of literacy activities, conducted over the past five years, have found the training, in and of itself, ends the isolation of women. It builds participatory skills and makes women more receptive to development ideas. These benefits persist regardless of the degree of literacy achieved.

Studies also document that women who have taken literacy classes participate more in collective community activities and social issues. Similar increases among nonparticipants were not noted. Actions reported by participants include preventing wife beating, helping to build schools, repairing local roads, organizing latrine-installation drives and antialcohol campaigns, and establishing village-wide policies of taking legal action against married men who attempt to abandon their wives for another. Interestingly but not surprisingly, a higher proportion of participants studied by Save 10 years after taking classes were found to be engaged in social actions compared with those studied by Burchfield one year after their classes. This difference may reflect the time needed to raise awareness and develop the fortitude to engage in some of the risky social actions that go against well-established community norms.

Ability to Earn a Living

Literacy participants surveyed in some villages in the Burchfield study reported initiating income-generating activities as a direct result of taking the course. And during 1996, participants saved more cash after taking the course than did nonparticipants. Although 64 percent of participants as well as nonparticipants in Save's study began engaging in income-generating activities after classes were held, participants were more likely to operate several income-generating strategies at once. What's more, they work in groups more frequently than women who did not attend the classes.

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Literacy and Numeracy Skills Among Women

In 1991 less than 22 percent of adult women were literate in Nepal. With USAID/Nepal's assistance, the literacy rate of adult women increased to an estimated 25 percent in 1995 and 28 percent in 1996.* And going by the findings of two recent studies of literacy activities, most participants are using and benefiting from the literacy and numeracy skills and other knowledge acquired during classes.

Most participants in Burchfield's study continued to read and write a year after taking their courses. And retention of literacy and numeracy skills learned during literacy classes remained high even 10 years later among participants surveyed by Save. That study found that 92 percent of participants could still read and 76 percent could still do basic mathematical operations. For some, writing simply meant writing their names, but most participants reported that they used their literacy and numeracy skills for a variety of their daily tasks: for writing letters and receipts and keeping household accounts, and for keeping others from cheating them when they went to the market. In fact, during literacy classes the women gained knowledge on a variety of practical topics. Such learning often has a profound effect on the participants' daily lives, because it builds on the real-life skills of adults and can be used immediately.

Self-Confidence and Critical Thinking Skills

Most participants interviewed in the Save and Burchfield studies reported that the literacy classes helped them realize they had capabilities beyond their domestic responsibilities. This powerful revelation led to an increased sense of self-confidence.

Forty-one percent of the participants interviewed by Save felt significantly more confident speaking to people they didn't know well. This was demonstrated during interviews conducted for this study: participants appeared far more comfortable talking with the evaluation team than did women in the control group. Burchfield's study found statistically significant differences between the treatment and control groups. For one, treatment groups felt more confident expressing their opinions to their family and community. For another, their opinions were more respected by family and community members. A third difference was that they increased their mobility, because after taking the classes, they felt more confident about riding the bus.

Literacy classes often provide women their first opportunity to participate in what becomes a support group in which they have an opportunity to discuss an array of problems and possible solutions. According to the Save study, such discussions have contributed to the beginning of critical social thought for many women. Forty-one percent of the participants surveyed reported they still think and talk about women's status. Before the course, they noted, no one thought analytically or critically about such things at all. Seventeen percent of nonparticipants said that though they had ideas, they had no one to discuss them with.

Health Practices

Several evaluations conducted in Nepal found that women's health knowledge and practices have improved as a result of attendance in literacy classes. According to the Save study, some of the ideas and practices introduced in classes have spread from participants to families across the community. There is some evidence these effects may become a community norm when a critical mass of women begin using improved health practices after taking literacy classes.

After exposure to a variety of health messages introduced during literacy classes, many par-

*This represents data generated as a result of USAID's literacy programs only.

ticipants adopted improved health practices. The Save and Burchfield studies noted increased installation and use of functioning latrines and smoke-outlet stoves and improved sanitation practices, such as keeping their houses and yards cleaner; covering food; and washing clothes, their children, and their own hands more frequently.

'Literacy classes often provide women their first opportunity to participate in what becomes a support group in which they have an opportunity to discuss an array of problems and possible solutions. . . . Such discussions have contributed to the beginning of critical social thought for many women.'

WOMEN'S LITERACY, MICROCREDIT, AND CHILDREN'S EDUCATION

With the formal school system now nominally poised to offer primary education for all, it is necessary to address barriers to girls' education that go beyond simple access to a school building and a teacher.

A child's experience of formal education is determined by two groups of adults:

- The teachers, who define the activities of the classroom
- The parents and other caretakers who determine whether the child will enter school, how much money will be spent in support of schooling, how often the child will attend class, and how much time the child can allocate to study

Many studies have demonstrated that the higher the level of parental education, the more likely parents are to support their children's schooling, with each generation attaining higher levels of education than their parents. The mother's level of education is a particularly powerful determinant of girls' educational attainment. Part of this intergenerational impact of education stems from an increased value being placed on children's education by parents who are themselves educated. In addition, the increase in earnings associated with increases in education makes children's schooling progressively more affordable to parents in proportion to their own level of education.

In a country like Nepal, in which a large portion of the adult population has little or no formal education, it would take too long for the cumulative (positive) intergenerational effects of schooling to lead to full participation of children in primary education. The huge gender gap in educational *attainment* among Nepalese adults exacerbates, and is mirrored by, a continuing gender gap in educational *participation rates* of boys and girls. For these reasons, it is appropriate to ask whether, and to what extent, the women's literacy programs and other nonformal education activities for women have contributed to increasing educational attainment among Nepalese children, especially among girls. Because of the wide-scale poverty in Nepal, it seems likely that income-generating activities, such as microcredit programs, might also advance children's education.

Study Methods

The programs studied vary widely in their goals, purposes, processes, breadth, cost, design, and effects. A comparison of program value would weigh these dimensions and aggregate them in some fashion. This was not the intention of this study. This study looked at one

dimension of total outcomes—first-generation girls' participation in school. By limiting our examination to one dimension, we make no claim to comparing overall value of the programs. Indeed, a program that is highly rated for girls' education might well have less *overall* value to Nepal.

The analysis draws on three sources of information: 1) educational statistics for Nepal reported by the government and donors, 2) program evaluations conducted by USAID partners and other implementers of women's programs, and 3) a field study conducted by the evaluation team.

Because the women's empowerment activities were aimed broadly at improving the social, cultural, and economic conditions of participants and their families, most of the evaluations conducted over the past few years concentrated on the outcomes discussed in the previous section. These studies provided a rich source of information on these outcomes. They were, however, of limited use in assessing to what extent empowerment programs for women affect the education of their children. To shed some light on this topic, the evaluation team collected primary data while in the field.

Realizing the inherent shortcomings and difficulties associated with conducting a rapid appraisal field study during a three-week evaluation effort, the team introduced as much rigor into the evaluation design as possible by employing a structured questionnaire to be used by all data collectors (experienced educational researchers from Nepal's Tribhuvan University). The team also reviewed school records to collect data on enrollment, attendance, and performance, rather than relying totally on mothers' answers.

The study included structured interviews with women who had completed programs in literacy or microcredit, or an integrated program in both literacy and microcredit. These were compared against a control group—women who were illiterate, who had been exposed to no literacy or other development programs in the past seven years, and who were not part of any other group. All 95 respondents were mothers of primary-school-age children; those in the microenterprise and control groups were illiterate.

Despite efforts to control for geographic, socioeconomic, and other variables, the team encountered difficulties in gaining access to groups with similar backgrounds. Clearly, the small samples used and the socioeconomic and geographic differences between the groups imposed serious limitations on the team's ability to separate program effects from the effects of the environment. Therefore, the findings based on an analysis of these data should be viewed as evidence of how the literacy and other women's empowerment activities may contribute to their children's education, rather than as definitive results of a controlled study.

The study was conducted in four village development communities in the western part of the Terai, a flat river plain in the south. The primary school enrollment rate of 6- to 10-year-old children (net enrollment rate) for this region was estimated at 72.0 percent in 1996, only slightly above the national net enrollment rate of 71.3. The gender gap in 1996 primary enrollment (male minus female net enrollment rate) stood at 24 percent (the national average was 20 percent). Literacy among adult males in this region was estimated at 62 percent; among adult females, 27 percent.

The field research, in conjunction with other data sources, showed that in certain contexts, especially in relatively isolated communities, women's literacy and microcredit programs appear to have had an impact on girls' participation in education. In other contexts, notably in locales near urban areas, access to mass media and formal labor markets may exert a more powerful influence on parents' support for their children's schooling, resulting in high participation and low gender gaps in schooling, even

among the children of illiterate mothers. The effect of women's literacy programs on children's education goes beyond that of participation rates. Supported by prior research, the field study demonstrates that women who have completed literacy programs become more deeply engaged in supporting their children's education in various ways. Associated with this support is more effective learning in school by both sons and daughters of literate mothers.

Impact of Programs on Children's Educational Attainment

It is inherently difficult, for three reasons, to measure the impact of women's literacy and microcredit programs on the educational attainment of their children. First, as a result of government efforts, more schooling is available for Nepalese children. Second, rarely are literacy or microcredit programs the only factors influencing changes in parental attitudes and behavior toward children. Finally, it is difficult to pinpoint the moment in a child's educational career when such changes become manifest.

As a crude measure, though, it is possible to compare educational attainment of children who became school age prior to the program with those who were already of school age when the program began. For the field study, the educational attainment of children aged 6 to 10 was compared with those aged 11 to 15. The measure used is "grade by age," or the percentage of grades completed relative to the age of the child. In Nepal, children begin grade one at the age of 6; thus the grade-by-age formula is: (*grade* + 5) ÷ age. So, a 6-year-old in grade one and a 10-year-old in grade five would both have 100 percent grade-by-age attainment, whereas a 10-year-old in grade three would score 80 percent.

Table 1 shows that the educational attainment of younger children in both the control group and the literacy group has increased by 10 percent over that of older children, whereas younger children in the microcredit and the microcredit-plus-literacy programs have registered greater gains, of 37 and 18 percent respectively. (*n* denotes the number of children in the cohort.) Although there are no statistically significant differences in grade-by-age attainment among members of the different groups, these findings suggest that effective microcredit programs, such as those included in this study, may support increases in educational attainment among children.

The similar increases in grade-by-age attainment between children of mothers who have completed literacy programs and those in the control group provide a cautionary note on attributing all change to program effects. Both groups are nearer to an urban area than the microcredit groups and had relatively higher school participation rates at the time that programs were initiated. It is likely that the greater exposure to national society and the formal labor market has been the primary influence on parents' decisions to send their children to school. The mothers in the literacy and control groups also have similar caste and ethnic compositions, including more than 20 percent who are Brahmins and about 65 percent who are Tharus, an indigenous Nepalese people. The microcredit and integrated groups are of more

Table 1. Grade-by-Age Attainment (Percent)

	Literacy	Microcredit	Both	Neither
Ages 11–15	78 (n=16)	60 (n=27)	71 (n=26)	80 (n=28)
Ages 6–10	86 (n=24)	82 (n=37)	84 (n=31)	88 (n=30)
Percent change	10 (n=40)	37 (n=64)	18 (n=57)	10 (n=58)

mixed caste and ethnicity, including larger proportions of Yadhav, Muslims, and formerly "untouchable" people—groups associated with high levels of child marriage for girls.

Gender Gap

The attainment levels of all four groups have increased over recent years. The increase has been dramatic in the group with the lowest starting point—that is, the group in which women have joined a microcredit program. (These women, of mixed caste and ethnicity, generally lived in remote areas.) The figures for school enrollment in all groups compare favorably with those of the western Terai region and the country as a whole (see table 2). However, the impact of each of these programs on girls is revealed by a closer look at the school enrollment rates of younger children. This cohort would be most affected by women's recent participation in literacy or income-generation activities. The differences among the groups in male and female participation is especially striking.

These figures show that among mothers who engaged in microcredit activities, much of the overall increase in education accrued to boys rather than girls. Among those studied, the children in this group show the largest gender gap. The gender gap is nearly equal to that of the region as a whole, possibly suggesting that microcredit activities in and of themselves may not directly change parental attitudes and values regarding girls' education.

'Among those studied, the children in [the microenterprise] group show the largest gender gap. . . . The gender gap is also quite high in the control group, in which mothers have not benefited from any nonformal education or economic empowerment activity.'

The gender gap is also quite high in the control group, in which mothers have not benefited from any nonformal education or economic empowerment activity. By contrast, the gender gap in the literacy group is lower; it is substantially lower in the integrated literacy group. While the sample sizes are far too limited to derive statistically significant conclusions, these differences do intimate the possibility of positive effects of women's literacy programs on girls' education, especially those integrated with a microcredit component. The educational participation levels of girls in the integrated program is particularly compelling, as it appears to represent progress against community norms of early marriage for girls, which are associated with very low educational attainment.

Table 2. Net Enrollment Rates Among Four Groups, Children Aged 6–10 (Percent)

Mother completed:	Male	Female	Gender Gap
Literacy	93 (n=9)	78 (n=15)	15 (n=24)
Microcredit	88 (n=20)	60 (n=17)	22 (n=37)
Both	85 (n=11)	82 (n=20)	3 (n=31)
Neither	100 (n=19)	74 (n=11)	21 (n=30)
Western Terai (net enrollment rate)*	84	60	24
Nepal (net enrollment rate)*	79	59	20

*Figures are from Nepal Multiple Indicator Surveillance Report.

Daily School Attendance

Table 3. School Attendance Rates (Percent)

	Female	Male	Average	Male–Female Differences in Percent
Literacy	88 (n=12)	88 (n=8)	86 (n=20)	0
Microcredit	67 (n=9)	77 (n=14)	73 (n=23)	10
Both	77 (n=7)	63 (n=15)	67 (n=22)	–14
Neither	95 (n=24)	86 (n=11)	92 (n=35)	–9
Total	86 (n=52)	77 (n=48)	82 (n=100)	–9

The field study revealed a second area in which microcredit programs alone may not benefit girls' education or boys'. Looking at the attendance records of a hundred children of the mothers interviewed, researchers found that the lowest average daily attendance was recorded among children of mothers engaged in microcredit activities, at 73 and 67 percent (see table 3). It is difficult to judge whether there are gender-specific effects of microcredit activities on children's school attendance as boys attend more regularly than girls in the microcredit-only group, whereas the reverse is true for the children of mothers in the integrated program. The high attendance of control-group children suggests, again, that nonprogram factors may have significant influence on children's school participation.

Repetition

One of the most striking outcomes associated with mothers' involvement in either microcredit or literacy programs is the lower level of grade repetition among their children. Grade repetition is high in Nepal's primary schools, averaging 23 percent. In the western Terai region, though not in all parts of Nepal, girls are more likely than boys to repeat primary grades.

As shown in table 4, repetition rates for both boys and girls in the microcredit and integrated program groups are lower than those for the region as a whole, as is average repetition among children in the literacy group. The extremely high repetition rates among control group children contrast sharply with those of children in all treatment groups, with the difference between control and all treatment groups statistically significant at 0.05. The high repetition rates among girls in the literacy group are partially a statistical anomaly and partially a reflection of the specific school choices of parents in that group. Six- to 10-year-old daughters of literacy program mothers are the smallest subgroup in the study. In addition, parents in this group have chosen to transfer their children from the local public school to a private school with higher achievement standards. Many of the girls repeated grades as a result of this transfer.

Support for Children's Education

That decision—to invest in more costly private education—points to one of the most striking findings on the effectiveness of women's empowerment programs in supporting the edu-

Table 4. Percent of Current Primary Students Who Have Ever Repeated

	Male	Female	Total
Literacy	9	42	24
Microcredit	27	6	17
Both	19	24	21
Neither	70	53	60
Western Terai	29	35	n.a.
Nepal	22	25	n.a.

Figures are from Nepal Multiple Indicator Surveillance Report.

cation of girls *as well as* boys. At the conclusion of the interviews with mothers, researchers asked to speak with one or more of the woman's children who were currently enrolled in primary school. The children were asked two questions: "Does anyone help you with your homework?" and "Does your mother help you in any way with your schooling?"

As shown in table 5, children of both sexes in all three program groups were more likely than children in the control group to report that someone helped them with their homework. That "someone" was more likely to be an older sibling or uncle than it was to be the mother, but the high prevalence of academic assistance shows that children are being encouraged and supported at home in their learning. In a similar vein, children in all three program groups were at least three times as likely as children in the control group to report that their mother helps them with school. The help the children reported was less often academic assistance than it was paying of fees, providing time for homework, or asking about school. Whatever form the assistance takes, parental support for education has been demonstrated around the world to be a powerful determinant of academic success. In both help with homework and any assistance from the mother, the differences were statistically significant between the control and all treatment groups.

Table 5. Percent of Children Receiving Help With School

	Get Help With Homework		Mother Helps With School	
	Male	Female	Male	Female
Literacy	50	58	36	42
Microcredit	61	34	54	34
Both	62	48	40	36
Neither	38	28	12	12

These findings are confirmed by other studies of women who have participated in literacy groups, with the Research Center for Educational Innovation and Development, Burchfield, and Save. The field study suggests that maternal concern for education may lead to higher levels of learning among children. The scores on the fifth-grade exam, which is standardized at the district level, averaged 41 percent and 50 percent among children of literacy program and integrated program mothers, respectively. That compares with 39 percent among the control group. (A grade of 30 percent passed a student.)

The sample is small and does not include children in the microenterprise group only; a larger follow-up study of achievement would be worthwhile. However, the exam score differences, together with observations of substantially lower repetition among children of program mothers, suggest that the cognitive and social development of mothers through literacy and microenterprise programs may translate into higher levels of educational achievement among their children.

EFFICIENCY AND BENEFITS

As Nepal gradually moves toward a less agrarian economy,[1] even the most marginal farmers will face two evolving conditions. First, a growing number of their children will have opportunities for nonagricultural work requiring some education. Second, those remaining in subsistence agriculture will face increasing numbers of situations in which an education will benefit them even if their livelihood remains rooted in agriculture. Gains to agriculture, health, sanitation, and marketing

[1] In 1995, 59 percent of national (market-based) production was nonagricultural, up from 49 percent in 1980.

all become possible with exposure to nonagricultural work and some literacy skills.

Aside from microcredit activities, most of the benefits and resources associated with the educational programs under review cannot be converted to monetary measures without substantial distortion. Thus, the bulk of the economic analysis looks at schooling costs and outcomes. The benefit analysis section describes a conceptual framework for evaluating overall benefits of nonformal, microcredit, and formal schooling investments.

Opportunity Costs

Women in Nepal's rural areas spend an average of 10.4 hours a day in productive labor. During a portion of this time (particularly during planting and harvesting seasons), some women actually are paid for their labor. Including the value of a simple meal, the wage rate for such labor is about 10 cents an hour. The labor lost to attending classes is a *portion* of this value (given that some of the time lost is not fully productive). Given this, table 6 shows the calculated opportunity cost of attending each program to completion.

The cost of participating in microcredit activities is low, because the time required before productive activities begin is small (estimated here at 10 hours). Literacy classes (requiring an estimated 390 hours) require a substantial commitment of time and sacrifices of production. Classes are generally held during nonpeak agricultural labor times, but even so, many women find the opportunity costs (lost productive time) prohibitive. High dropout rates for literacy classes are judged to be due to the high cost of valuable labor time lost. It could be that the poorest of the poor face insurmountable opportunity costs in attending such activities.

Women who participated in either literacy or microcredit activities were asked what kinds of adjustments they made to be able to participate in the activities. Responses were then categorized into groups. Each woman's response was assigned one group only. Thus, although many women probably had multiple coping strategies, only the predominant strategy was recorded. Their responses are recorded in table 7.

For most women, attending classes or generating other income required that they work harder and make specific efforts to please their husbands during hours when they were not engaged in these activities. This is a particular burden for women who attend literacy classes, as literacy classes take time away from all productive labor (whereas microcredit activities may well substitute for missed productive time spent elsewhere). Microcredit activities also used the labor time of daughters-in-law a substantial portion of the time but demanded little from their husbands. In contrast, those who attended literacy classes often depended on their husbands for additional help. It could be that the types of husbands who support their wives' attendance of literacy classes are also more likely to be willing to provide additional labor at home. It could also be that the type of women who attend such classes are more assertive (or become more assertive) at home and request such help from their husbands.

Outcome Efficiency

As discussed earlier, the programs evaluated have a number of outcomes, only one of which is girls' education. Assessing the *value* of literacy or microcredit programs purely on their effect on girls' education, then, leaves out the contributions such programs make to other aspects of people's lives. Nevertheless, it is possible to

Table 6. Per Person Opportunity Costs of Programs (in 1997 US$)

Literacy	Microcredit	Literacy + Microcredit
27.37	0.70	28.07

Table 7. How Women Managed Lives to Go to Classes (Percent)

	Literacy	Microcredit	Literacy + Microcredit	Total
Number	68	103	83	254
Effort to make husband happy	0.00	0.00	8.43	2.76
Daughter helped more	19.12	30.10	18.07	23.23
Worked harder	61.76	30.10	45.78	43.70
Daughter-in-law helped	4.41	22.33	0.00	10.24
Husband helped	10.29	0.00	20.48	9.45
Other person helped	4.41	15.53	3.61	8.66
Other	0.00	1.94	3.61	1.97

compare the outcomes of these programs on girls' education, as long as such comparisons are seen in light of their contribution to overall outcomes.

Costs of primary schooling. The opportunity cost of sending a girl to school one year is approximately equal to the opportunity cost of a woman's attending a literacy class.[*] Since formal schooling also requires out-of-pocket expenses (such as books and supplies), a year of girl's schooling is 32 percent higher for families than is the cost of a woman's attending a six-month literacy course.

Table 8 shows costs of one year of primary schooling.[†]

Repeaters. Repeat rates for children in households surveyed were high. About 21 percent of children whose mothers had attended either literacy or microcredit activities had to repeat a grade. But of those whose mothers had *not* attended any of these activities, repeat rates were about 60 percent. On average, a child had completed 4.12 grades. So the higher repetition rates of children whose mothers had *not* attended training adds 34 percent to the cost of their schooling. This additional cost ($13.88) would include an increase of private ($3.31), public ($3.61), and opportunity costs ($6.96) of schooling.

Table 8. Annual Public Primary School Costs for Girls (in 1997 US$)

Institutional costs (public)	15.03
Private costs (family)	13.80
Opportunity costs (child and family)	29.00
Total	57.83

Gender equity. Our sample suggests that daughters of women who participate in a microcredit scheme are somewhat disadvantaged in school participation. Because the microcredit group studied here is from the poorest of the poor (and given our small sample size), it cannot be said definitively that the lower school participation of girls is attributable to their mothers' microcredit activities. But a good case could be made for such.

Daughters of women who were participating in a microcredit scheme but had no literacy training were less likely ever to be enrolled in school than girls from other groups. Relative to their male siblings, they were much more disadvantaged in this measure—attending at a rate 10 percent less than boys (see table 3). As a

[*] The value of one hour of a girl's labor was calculated at 70 percent that of a woman's labor.

[†] Costs are not a proxy for measuring total value of programs to the country. Formal and nonformal educational programs cannot be compared directly for costs, because their effects and outcomes differ (see "Benefit Analysis" section next page). Neither can all effects and outcomes of schooling and nonformal educational programs be reduced to comparable numbers.

result, fully 82 percent of girls aged 11 and over had not stayed in school long enough to complete grade four. For male children in this same microcredit group, only 10 percent had not stayed long enough to complete grade four.

'For the poorest of the poor, education must be viewed as having immediate and direct effects to be worth the investment in time and energy.'

Aside from the possibility these effects are socioeconomic, a good case could be made that such gender-equity effects result from varying opportunity costs of girls' and boys' labor. In the Terai, girls work 20 percent more hours than do boys. Their domestic labor is nearly three times that of their male siblings. Since girls' labor is more likely to be substituted for mother's labor when the mother is generating income through microcredit activities, it stands to reason that girls' labor becomes even more valuable to the family. Girls' time in school may well be traded for mother's income-generation activities. If our sample results guide us in this regard, the addition of literacy classes to mother's microcredit participation mitigates this negative gender-equity effect.

Benefit Analysis

Education is not an end in itself but rather a means to an end. Educational investments need to be evaluated by how much they benefit the populations they serve. Although nonformal educational programs need, ultimately, to be compared with investments made directly in formal education programs, outcome efficiency cannot, for three primary reasons, be used as a proxy for benefits: First, primary benefits accrue to two different populations (parents and their children). Second, returns have substantially different time lines (1 to 2 years versus 10 years or more). Third, outcomes of the two types of programs vary greatly and are diffuse. They go well beyond direct economic measures and measures of schooling achievement.

For the people of the Terai, few are likely to benefit from an education that molds them toward a life far removed from their rural agricultural existence. Any activity that either takes away from production or requires additional resources is likely to be viewed as a luxury. For a society of marginal subsistence farmers, committing children's time to agricultural production (or ancillary support of such production) rather than schooling can easily be seen as rational behavior.

For the vast majority of Nepal's Terai residents, then, education ought to be affordable and ought to have outcomes useful within the rural context. Education that goes beyond this resource–benefit mix would be inefficient for the vast majority of rural Terai dwellers.* Education must fit within the very narrow margin of spare resources and must help them to make a transition to a more modern world.

For the poorest of the poor, education must be viewed as having immediate and direct effects to be worth the investment in time and energy (that is, assuming they can afford any opportunity costs). Sustainability and investment returns are relatively unimportant in a marginal existence. For those already participating in a nonagricultural economy, even to a small ex-

*As with all educational contexts, a range of educational opportunities ought to be available. At least some small portion of rural Terai children can have futures that vastly benefit from high levels of formal education just as some will never benefit from any education, no matter how available it is. This report, necessarily, examines the typical Terai region dweller.

tent, educational returns that are longer term and sustainable take on increasing importance. Directness and immediacy can be forgone for long-term gains.

Thus, in comparing the benefits of two types of educational investments—formal schooling of girls and nonformal training of mothers—the relative benefits would differ depending on how marginal are the lives of the families involved. The opportunity costs of girls' education are still too high in the poorest of Nepal's families, so nonattendence is high. Increasing the opportunities and labor value of mothers (as is theorized in adult literacy classes) may well free girls' time for schooling if the mother can translate her own increased value into a process that benefits the next generation. If a mother's increased labor value is attributable only to her own ability to generate income (skills training or microcredit activities), then girls' schooling time may well be traded for the mother's increased economic productivity time.

SUSTAINABILITY

The study examines the financial and institutional sustainability of nonformal education programs as well as the sustainability of outcomes.

Financial

The government commits 1.3 percent of its education budget to nonformal education endeavors (for both sexes). This commitment is fully within the development portion of the Ministry of Education's budget. In 1995–96, the government apportioned no money from its regular budget for nonformal or women's education activities. In the Master Plan for Basic and Primary Education, however, government and donors have committed about 5 percent of total expenditure to nonformal education for adults and out-of-school children, amounting to around $4 million over five years. The government has no provision for sustaining nonformal and women's education over the long term.

Although the government has a long history of nonformal education program implementation, the bulk of literacy activities at present are carried out by nongovernmental organizations—either local or international. Reportedly, more than 600 local NGOs, 3 governmental organizations, and 18 international NGOs are currently working in nonformal education. Clearly, if literacy programs are to be continued, they will require financial commitments from donors, the government, and the private sector. Some women's literacy and income-generating groups have succeeded in tapping into existing resources for local development. Notably, they have used the government's fund for community development, administered through village development community offices.

Over the long term it can be expected that literacy instructional needs will diminish relative to specialized learning needs of adults and formal education needs of children and youth. As a greater percentage of the population moves from bare subsistence with no exposure to education to market-connected lifestyles where some training or education is common, education needs will move away from nonformal programs toward formalized schooling. In urban areas, this trend is already well under way. Before that stage is reached in most rural areas, medium-term investments in literacy and postliteracy activities will have to be sustained.

Regardless of whether literacy programs are sponsored by the government or external agencies, the cost of providing literacy is relatively low compared with formal schooling. Table 9 shows a comparison of costs for females.[7]

[7] Educating males is cheaper for the family, because the opportunity costs of their lost labor are smaller.

The costs of both literacy classes and formal schooling are primarily borne privately—through either direct costs or opportunity costs. Families bear about 75 percent of the total costs of schooling. For many of the families the evaluation team spoke to, private costs are not prohibitive. A significant portion of the rural families interviewed were sending their children to a private (more expensive) school in order to provide them with a higher quality education. For the poorest and most remote families, though, the opportunity costs of schooling will continue to be high and will represent a continued restraint on participation in either literacy classes or formal schooling—especially for females.

Table 9. Costs of Providing Formal Schooling and Nonformal Schooling to Females (in 1997 US$)

Duration	Literacy Class (six-month class)	Formal Schooling (one year of primary school)
Institutional costs	10.54	15.03
Private costs	0.00	13.80
Opportunity costs	27.37	29.00
Total	38.91	57.83

Institutional

Nepal has a long history of literacy, income-generation, and postliteracy program implementation. That experience has created a broad base of institutional and human resources to support further and more refined programs, both in government and, increasingly, in the private sector. With more than 600 local NGOs operating in the field, the wealth of human resources available for nonformal education of all sorts is impressive. These include both paid staff and a multitude of trained volunteers. The NGOs themselves have developed institutional structures and are beginning to develop the capability to seek alternative funding sources as well as to develop new programs. This pool of skilled human resources and institutional experience lowers the costs of ongoing or expanded programming in women's nonformal education.

Outcome

The sustainability of outcomes looks positive for the programs covered by this study. Microcredit programs show high loan repayment rates and promise returns to the women themselves in a relatively short time. The outcomes to literacy and postliteracy programs demonstrate two forms of sustainability. One is the long-term maintenance of literacy by the women themselves. The other is the cumulative intergenerational effect of learning among women on the education of their children.

CONCLUSIONS

The foregoing leads to conclusions regarding synergies and interrelationships, and USAID's comparative advantage.

Synergies and Interrelationships

As attested by numerous evaluations, the personal growth and change among women participating in empowerment and literacy programs is as tangible as it is, often, immeasurable. The field researchers found among participants the same outspokenness, critical reflection, and visions of the future documented by other investigators. These contrast sharply with the reticence and restricted visions of illiterate Nepalese women without access to personal growth activities. Because women in their 30s (the average age of participants in the study) are the beneficiaries of literacy and microcredit programs, they are creating, in the long term, a range of new roles for Nepalese women, as well as boys and girls.

In the shorter term, personal development among illiterate women changes their attitudes and behavior toward their own children's education. Whether earning an income or learning to read, increased knowledge and skills among women leads to higher levels of maternal support, both material and behavioral, for their children's education. However, for that support to benefit girls as well as boys, it appears that increases in income are not enough. Traditional beliefs about the role of women, and therefore the proper upbringing of girls, change most directly when mothers are stimulated to think about the larger world. This happens when they become literate and, more so, when they discuss issues with other women in programs aimed at improving literacy and increasing their general knowledge.

The field study made clear that women who have been denied formal schooling are eager to have access to learning opportunities. Women in the control group urged researchers to record their names as candidates for literacy programs. Participants who were studied cited specific knowledge that they had attained that improved their lives. Such knowledge ranged from record-keeping to oral rehydration therapy for their children. Many asked for further education in health, group action, and income generation. The findings of this study, backed by other studies, suggest that such development will contribute to greater opportunities for and benefits from formal schooling for children.

USAID's Comparative Advantage

USAID has 20 years of experience in basic literacy and postliteracy in Nepal. That gives the Agency a unique advantage in supporting the new generation of integrated development programs for women that is being carried out in partnership with local and international NGOs. The programs include a broad scope of postliteracy activities, including economic and legal empowerment and reproductive health. The Agency recently worked with 8 international NGOs and 600 local NGOs in implementing literacy, postliteracy, and skills-training programs for Nepalese women. Capitalizing on these connections, one of USAID's international partner NGOs has used funding from a Global Bureau project to initiate an information-sharing group for individuals and organizations involved in women's education. This activity strengthens the information sharing supported by the Mission, improving the quality of program design and enhancing the efficiency of program delivery by preventing duplication of services.

Finally, USAID/Nepal has a global advantage in, and perhaps even responsibility for, adding to the state of knowledge concerning the synergies between the education of women and the education of girls as well as other development goals. Few countries have had as long-standing a commitment to nonformal education as Nepal; few donors have been as deeply and broadly committed to the education of women through nonformal education as USAID. Whatever lessons can be derived concerning the intergenerational effects of literacy and postliteracy programs for women are likely to be learned first in Nepal.

LESSONS LEARNED

1. Development of skills and knowledge among mothers can translate into higher levels of educational attainment among children. Women who have completed programs that teach income enhancement, or a combination of both literacy and income enhancement, are more likely to send their children to school. They also behave differently in regard to their children's education, showing greater interest in the learning process. Such parental engagement is a well-established correlate with school success around the world. In the field study, greater levels of learning were manifested in lower levels of grade repetition among children

whose mothers had completed such programs. The study also found a possible link between mothers' cognitive and social development through integrated literacy and microenterprise programs and higher examination scores among their children.

2. The magnitude of the impact of literacy and microenterprise activities on children's education varies by socioeconomic and cultural context. In a country as ethnically and economically diverse as Nepal, both the initial conditions of communities and the larger factors that impinge on them vary dramatically. Access to media, proximity to urban areas, and formal sector earning opportunities are powerful forces of change in parental attitudes and behavior toward children. Long-held beliefs and behaviors, which define gender roles in different communities, can be powerful deterrents to such change. It is likely that the effect of maternal education on children's schooling, especially that of girls, will be more pronounced in more isolated communities and those with more traditional gender roles.

3. Increased earnings by mothers do not necessarily or immediately translate into more education for their daughters. Although both sons and daughters of mothers involved in microcredit schemes reported that their mothers paid their school fees, the gender gap in education was largest in this group among all program groups. In contrast, the gender gap among children of mothers who had completed literacy or integrated programs was quite low. Particularly in societies with strong traditional gender roles, the consciousness-raising stimulated by literacy and postliteracy activities appears to have the greatest effect on the education of girls.

4. Maternal support for education stimulated by program participation translates into private and social savings. The lower levels of grade repetition by children whose mothers participated in literacy and microcredit programs represents a substantial savings for both parents and the society as a whole. Parents are spared the expense of additional years of schooling that result from repetition—or the loss of learning among their children associated with early dropout as a consequence of repeated failure. Society as a whole saves, too, as children acquire education more efficiently. Lower grade repetition leads to a cost saving in the education system, freeing up resources for more and higher quality education for all.

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